

What Is Claimed Is:

1. A driveshaft comprising two constant velocity universal joints and an intermediate shaft;

one of the constant velocity universal joints (11) comprises an outer joint part (12) with first ball tracks (14) which form a first angle of intersection with the joint axis (A), an inner joint part (17) with second ball tracks (18) which form a second angle of intersection with the joint axis (A), balls (19) which run in pairs of tracks comprising a first ball track (14) and a second ball track (18), and a cage (20) which holds the balls (19) in a common plane (E), wherein the first and second angles of intersection of the ball tracks (14, 18) of a pair of tracks are identical in size and are positioned symmetrically relative to the joint axis (A) and wherein the ball cage (20) is axially fixed in the constant velocity joint;

the intermediate shaft comprises a longitudinal plunging unit (41) having a sleeve (42) with first ball grooves (43) which extend axially, a journal (44) with second ball grooves (45) which extend axially, balls (46) which are held in groups in pairs of grooves each comprising a first ball groove (43) and a second ball groove (45), and a cage (47) which holds the balls (46) at a fixed distance from one another.

2. A driveshaft according to claim 1, wherein the ball cage (20) comprises an inner cylindrical guiding face (31) in which the inner joint part (17) is held radially, and a spherical outer face (39) which is held axially and radially between first and second annular stop faces (26, 27) of the outer joint part (12).

3. A driveshaft according to claim 1, wherein the ball cage (20) comprises an inner cylindrical guiding face (31) in which the inner joint part (17) is held radially, and a spherical outer face (39) which is held radially in an inner cylindrical guiding face (25) of the outer joint part (12),
5 wherein the inner joint part (17) is supported in a first direction (R1) on an annular stop face (32) in the ball cage and wherein the ball cage (20) is supported in a second axial direction (R2) on a second annular stop face (27) in the outer joint part (12).

4. A driveshaft according to claim 1, wherein the ball cage
10 (20) comprises an inner cylindrical guiding face (31) in which the inner joint part (17) is held radially, and a spherical outer face (39) which is held radially in an inner cylindrical guiding face (25) of the outer joint part (12), wherein the ball cage is supported in a first axial direction (R1) on a first annular stop face (26) in the outer joint part (12) and wherein the inner joint
15 part (17) is supported in a second axial direction (R2) on a second annular stop face (33) in the ball cage (20).

5. A driveshaft according to claim 1, wherein the ball cage (20) comprises an inner cylindrical guiding face (31) in which the inner joint part (17) is held radially, and a spherical outer face (39) which is held
20 radially in an inner cylindrical guiding face (25) of the outer joint part (12), wherein the inner joint part (17) is supported in a first axial direction (R1) on an annular stop face (32) in the ball cage and in a second axial direction (R2) on a radial end face (36) of the outer joint part (12).

6. A driveshaft according to claim 2, wherein the outer
25 joint part (12) comprises an annular part (13) forming the first stop face (26)

and an inner cylindrical guiding face (25) for supporting an outer face of the ball cage (20), and a base part (15) in which there is formed the second stop face (27).

7. A driveshaft according to claim 6, wherein the base
5 part (15) is a plate metal cover (29).

8. A driveshaft according to claim 2, wherein the outer
joint part (12) comprises an annular part (13) in which there is formed an
inner cylindrical guiding face (25) for supporting an outer face of the ball
cage (20), an attaching cap (16) in which there is formed the first stop face
10 (26), and a base part (15) in which there is formed the second stop face (27).

9. A driveshaft according to claim 8, wherein the base
part (15) is a plate metal cover (29).

10. A driveshaft according to claim 3, wherein the outer
joint part (12) comprises an annular part (13) in which there is formed the
15 inner cylindrical guiding face (25), and a base part (15) in which there is
formed the second stop face (27).

11. A driveshaft according to claim 4, wherein the outer
joint part (12) comprises an annular part (13) in which there is formed the
inner cylindrical guiding face (25), and an attaching cap (16) in which there
20 is formed the first stop face (26).

12. A driveshaft according to claim 2, wherein the inner
joint part (17) comprises a spherical outer face (28).

13. A driveshaft according to claim 2, wherein an outer face of the inner joint part comprises a spherical portion (28) and two conical end regions (37, 38).

14. A driveshaft according to claim 1, wherein the journal
5 (44) and inner joint part (17) are integrally formed.

15. A driveshaft according to claim 1, wherein the journal (44) is hollow.

16. A driveshaft according to claim 15, wherein the journal (44) is fixed to the inner joint part (17) by friction welding.

10 17. A driveshaft according to claim 5, wherein the inner joint part (17) includes a central stop member (35) for acting against the radial end face (36) of the outer joint part (12).